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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/071,951
Filing Date: February 06, 2002
Appellant(s): MUPPIDI ET AL.

David H. Voorhees
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 10/12/2006 appealing from the Office action mailed 3/24/2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,718,141	deVette	6-2004
6,456,599	Elliot	9-2002

(9) Grounds of Rejection

The following grounds of rejection are applicable to the appealed claims:

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Claims 1, 2, 4-13, 17-25, 29, 30, 34, 36-43, and 47-50 are rejected under 35

U.S.C. 102(e) as being anticipated by deVette.

Claims 14-16, 26-28, 31-33, 35, and 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over deVette.

Claims 51-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over deVette in view of Elliot.

This rejection is detailed in the Final Office action mailed 3/24/2006 and the Advisory action mailed 6/29/2006.

(10) Response to Argument

I. INDEPENDENT CLAIMS

A. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by deVette.

Regarding claim 1, Appellants argue that deVette fails to teach or suggest the step of “each node of said plurality of optical nodes determining a network configuration having a topological map of network links corresponding to the discovered neighboring nodes.”

Examiner respectfully disagrees. It is noted that the claim does not disclose that each node determines a network configuration having a topological map of the *entire* network, but rather that each node determines a network configuration having a topological map of network links *corresponding to the discovered neighboring nodes*. At column 2, lines 35-38, deVette discloses that:

“It is further desirable to provide a WDM network where *individual nodes can detect the connectivity of incoming optical signals* and based on their own internal connectivity, broadcast downstream the new signal connectivity.” (emphasis added)

It is noted that the “connectivity” report of optical signals is the “configuration” of the topology of the discovered neighboring nodes. DeVette, at column 22, lines 40-45, discloses that:

“Each node connectivity report 610 generated by a node 230 reflects only what *topology and connectivity data* has been reported to it by upstream nodes 293, 294.” (emphasis added)

Further, deVette, at column 19, lines 56-60, discloses that:

“The configuration of each of the node connectivity reports 610 generated by a node 101-122 may be obtained from the most recently received corresponding upstream node-to-node messages 400 stored by the OSC processor 280 of the node as described above.”

Still yet further, deVette, at col. 27, lines 46-52, expressly discloses that:

“at least one of the nodes determining its configuration by: receiving configuration information from an upstream node; modifying the configuration information to account for its effect thereon; and transmitting the modified configuration information to a downstream node”

Each node of deVette comprises an OSC processor (see e.g., OSC processing subsystem 234 of fig. 2A) which functions to circulate a configuration signal via a node-to-node message. This message, which acts like a token being passed along the network, contains information defining the network configuration corresponding to the previously discovered upstream neighboring nodes (see Table 1 and col. 15, lines 39-65; col. 14, lines 17-45). These connectivity reports, reflecting the reported topological map of network links corresponding to the discovered upstream neighboring nodes (col. 22, lines 42-45; see also col. 19, lines 22-40), are generated and transmitted by each node via the OSC processor.

Appellants also contend that a cited portion of deVette, column 22, lines 42-54, used in the previous Office action teaches away from the claimed invention. DeVette, at column 22, lines 42-54, reads:

“Each node connectivity report 610 generated by a node 230 reflects only what topology and connectivity data has been reported to it by upstream nodes 293, 294. While, as has been shown, certain error conditions may be detected using this information, the possibility that the data reported by one or more upstream nodes 293, 294 has been corrupted by a fault in a segment 125-145 or a node 101-122, while expected to be rare, cannot be discounted. Such an event would not necessarily be detected, but would result in corruption of downstream node connectivity messages 610. *This would cascade to subsequent nodes and the connectivity messages would become completely unbelievable.*” (emphasis added by Appellants)

From this, Appellants conclude that “such a defect as described by deVette would certainly dissuade one from using node to node information to determine network configuration” (see pg. 13, Appeal Brief). It seems that Appellants are disregarding the accumulation of evidence presented by deVette and incorrectly concluding that a course of action is unfavorable without considering that its advantages might outweigh its disadvantages. Throughout the entire disclosure, deVette explains the advantages and the functions of his invention of using node to node information to determine network configuration. In the cited portion above, deVette is merely noting that errors, “while expected to be rare,” can exist and have the potential to produce cascading negative effects on system performance. This is in no way suggesting that deVette’s own invention should not be used simply because of the rare possibility and potential of cascading errors in connectivity messages.

Additionally, Appellants point out that “deVette expressly states that the mapping processor is located in CNM 123. (See deVette, col. 13, lines 55-60) Contrary to the examiner’s assertion, CNM 123 [is] not part of a node but is the Central Network Monitor” (pg. 13 of

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Appeal Brief). This information, however, is irrelevant to the argument because Examiner is not using the CNM or the mapping processor to read on the claimed limitations. Instead, as discussed above and in the previous Office actions, it is the configuration signal processors and the OSC processing system that determine configuration data of both the node itself and the nodes upstream. DeVette at column 4, lines 37-43 reads:

“a configuration signal containing configuration data for modulating a WDM compatible configuration wavelength reserved throughout the network, *configuration signal processors associated with each network node* for generating configuration data specific to its associated network node, and a mapping processor for determining the configuration of the entire network” (emphasis added)

Furthermore, deVette, at column 19, lines 56-64, discloses that:

“A node connectivity report message 610 is generated by a node 230 for each different upstream node-to-node message 400 it has received.” (col. 19, lines 27-29)... “The configuration of each of the node connectivity reports 610 generated by a node 101-122 may be obtained from the most recently received corresponding upstream node-to-node messages 400 stored by the OSC processor 280 of the node as described above. More particularly, the contents of fields 613-619 correspond identically to the contents of fields 401-407 of the most recent copy of the corresponding upstream node-to-node message 400 and the contents of field 612 is the identity of the current node 101-122.”

The configuration signal processors are located in each node and as discussed above, each node determines network configuration corresponding to the discovered neighboring nodes, i.e. – the node connectivity reports. The mapping processor, located in the CNM, takes all the network configuration determinations from all of the nodes and determines the configuration of the entire network.

MPEP § 904.01 recites:

“The breadth of the claims in the application should always be carefully noted; that is, the examiner should be fully aware of what the claims do not call for, as well as what they do require. During patent examination, the claims are given the

broadest reasonable interpretation consistent with the specification. See *In re Morris*, 127 F.3d 1048, 44 USPQ2d 1023 (Fed. Cir. 1997).

As such, given the broadest reasonable interpretation of the limitation consistent with the specification, Examiner maintains the position that deVette clearly teaches the limitation “each node of a plurality of optical nodes determining a network configuration having a topological map of network links corresponding to the discovered neighboring nodes.”

B. Claim 20 is rejected under 35 U.S.C. 102(e) as being anticipated by deVette.

Regarding claim 20, Appellants argue that deVette fails to teach or suggest the step of “generating an alarm signal indicative of a network configuration error responsive to detecting an error between the network configuration and a planned configuration.” Examiner respectfully disagrees. Appellants assert that none of the portions of deVette cited in the previous Office action describe detecting an error between a network configuration and a planned configuration.

The cited portions of deVette in the previous Office action are reproduced, in part, below:

“FIG. 8 sets out in flow chart form the logical steps taken by the CNM 123 in the preferred embodiment in processing the node connectivity reports 610 which it receives from nodes 101-122 in the network 100 to generate and maintain an up-to-date map of the topology and connectivity of the network 100... Periodically, an alignment audit will be conducted in which the connectivity map as then constituted is saved and completely erased. As the connectivity map is thereafter regenerated, any discrepancies which reflect the existence of a fault or a reprovisioning will become apparent and can be processed.” (col. 20, lines 54-67)

“comparing the theoretical topology and connectivity data provided by the first embodiment through the out-of-band data disseminated along the OSC, with the actual connectivity of the network 100 using in-band data which modulates the payload data modulating the payload-bearing WDM wavelengths” (col. 22, lines 57-63)

“the at least one node comparing the identification data with the configuration information received from the upstream segment; and the at least one node

transmitting an alarm message to denote an inconsistency between the identification data and the configuration information.” (col. 28, lines 25-27)

DeVette explicitly discloses that the network generates and maintains an “up-to-date map of the topology and connectivity of the network” and periodically, an “alignment audit” is conducted wherein “any discrepancies which reflect the existence of a fault or a reprovisioning will become apparent and can be processed.” DeVette also explicitly discloses that the “*theoretical* topology and connectivity data” is compared with the “*actual* connectivity of the network.” Still yet further, DeVette specifically discloses that an “alarm message” is transmitted “to denote an inconsistency between the identification data and the configuration information.” As such, Examiner maintains the position that DeVette teaches the limitation “generating an alarm signal indicative of a network configuration error responsive to detecting an error between the network configuration and a planned configuration.”

Additionally, it is noted that the “information model” of the network is interpreted in light of the specification to mean a model “that has a data format that facilitates determining a topological map having the same neighbor relationships” (see paragraph 0040 of Appellants’ specification). As discussed above with respect to claim 1, DeVette specifically discloses that each node forms a topological map having the same neighbor relationships – i.e., corresponding to the discovered neighboring nodes. Furthermore, as cited above with respect to claim 1, DeVette, discloses “at least one of the nodes determining its configuration by: receiving configuration information from an upstream node; modifying the configuration information to account for its effect thereon; and transmitting the modified configuration information to a downstream node” (see col. 27, lines 46-52). It is parenthetically noted that the disclosure of “at least one of the nodes” encompasses the limitation of “each node.” The “determining,”

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“receiving,” “modifying,” and “transmitting of network configuration information is understood as “a data format that facilitates determining a topological map.”

Accordingly, it is the examiner’s position that deVette clearly teaches the limitations of claim 20.

C. Claim 29 is rejected under 35 U.S.C. 102(e) as being anticipated by deVette.

Regarding claim 29, Appellants argue that deVette fails to teach or suggest the step of “for each node, publishing the identity of its neighbors.” Specifically, Appellants argue that deVette does not teach publishing the identity of more than one neighbor. Examiner respectfully disagrees. As can be seen from Fig. 2A, the identities of two nodes 293 and 294 are received and published by node 230. Furthermore, since the term “neighboring node” has not been defined in the claims or the specification, Examiner has used the common definition of “neighbor” as defined in the *American Heritage Dictionary*: “neighbor - a person, place, or thing adjacent to or located near another.” Thus, a neighboring node is a node that is “adjacent to or located near” another node. In the system of deVette, since these upstream nodes are “located near” the given node, these upstream nodes are understood as “neighboring nodes.” Moreover, since the identity of these neighboring nodes are published, Examiner maintains the position that deVette reasonably and broadly reads on the limitation “for each node, publishing the identity of its neighbors.”

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D. Claim 36 is rejected under 35 U.S.C. 102(e) as being anticipated by deVette.

Regarding claim 36, Appellants argue that CNM 123 of Figure 1 cannot be considered as part of node 101. Examiner respectfully disagrees. CNM 123 is directly connected to and operates exclusively with node 101 (see Fig. 1). It is noted that unless improved results are achieved through integration, two components can be considered integral as long as all of the essential elements of the claims except the integration of parts are found in the references. See *In re Lockhart*, 90 USPQ 214 (CCPA 1951). As such, since CNM 123 and node 101 perform all the functions as claimed and since each are directly connected to and operate exclusively with each other, CNM 123 is understood as being integral to node 101. Therefore, CNM 123 is understood as being part of node 101. See also *In re Larson*, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965), "To Make Integral."

E. Claim 40 is rejected under 35 U.S.C. 102(e) as being anticipated by deVette.

Regarding claim 40, Appellants argue that deVette does not disclose that each node is configured to identify itself to its neighbors and to publish the identity of its neighbors. Specifically, Appellants argue that deVette does not teach identifying itself and publishing the identity of a plurality of neighbors. Examiner respectfully disagrees. As discussed above, the identities of a plurality of nodes 293 and 294 are received and published by node 230 and the node 230 identifies itself to a plurality of neighbors 295 and 296 (Fig. 2A). Furthermore, as discussed above, since the term "neighboring node" has not been defined in the claims or the specification, Examiner has used the common definition of "neighbor" as defined in the *American Heritage Dictionary*: "neighbor - a person, place, or thing adjacent to or located near

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another.” Thus, a neighboring node is a node that is “adjacent to or located near” another node. In the system of deVette, since the identity of a plurality of nodes are published and since the node publishes its identity to a plurality of upstream nodes, Examiner maintains the position that deVette reasonably and broadly reads on the limitation that “each node is configured to identify itself to its neighbors and to publish the identity of its neighbors.”

Additionally, Appellants argue that deVette fails to disclose at least one of the nodes being configured to form a model of the network configuration from the published neighbor information. However, as discussed above with respect to claim 36, since CNM 123 and node 101 perform all the functions as claimed and since each are directly to and operate exclusively with each other, CNM 123 is understood as being integral to node 101. Since CNM 123, which is understood as a part of node 101, forms a model of the network configuration (see Abstract), deVette clearly teaches the limitation “at least one of the nodes being configured to form a model of the network configuration from the published neighbor information.”

F. Claims 51 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over deVette in view of Elliot.

Regarding claims 51 and 54, Appellants contend that there is no basis for the combination of deVette and Elliot. Examiner respectfully disagrees for at least three reasons. Appellants state that “deVette fails to teach any application of data collection relevant to a bidirectional system, but only to a unidirectional system” (pg. 28 of Appeal Brief). However, the opposite is clearly true based on deVette’s disclosure of his communication system. As noted by Examiner and acknowledged by Appellants, deVette discloses that bidirectional communication

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systems are used in long-haul networks (see col. 1, lines 38-41). Furthermore, deVette recognizes that:

“In practice, most telecommunications services require bi-directional communications. In a long-haul network, a band of available wavelengths is typically reserved for transmission in one direction and a second band of available wavelengths is reserved for transmission in the opposite direction. In a metropolitan network, such as shown in FIG. 1, a complementary network comprising nodes, segments, LTEs and signal lines but with light propagating in the opposite direction is typically installed. Conventionally, the corresponding nodes from the two complementary networks are located in physical proximity to one other and may share certain processing features such as OSC processing as described below. For purposes of clarity of FIG. 1, the complementary network has been omitted.” (col. 6, line 58 – col. 7, line 4, emphasis added)

DeVette expressly cites that signal lines and segments in the opposite direction are typical installed and that for the purposes of clarity, this complementary network has been omitted. As such, it is clear that deVette expressly teaches the application of data collection relevant to a bidirectional system.

Secondly, Appellants provide insufficient support for the contention that the combination of deVette and Elliot has no basis. Even if deVette did not expressly disclose bidirectional communication, it still would not provide sufficient support for the allegation that the combination of deVette and Elliot has no basis. Generally, two references are combined because one lacks a limitation that the other has; the lack of limitation in one reference (e.g., bidirectional data collection) that is fulfilled with another reference is not sufficient grounds to allege that a combination has no basis. Furthermore, by arguing that deVette lacks a limitation without considering that it is fulfilled in the teachings of Elliot, Appellants are arguing against the references individually, when the rejections are based on combinations of references. See *In re*

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Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Thirdly, as discussed above with respect to claim 1, Appellants contend that a cited portion of deVette used in the previous Office action (col. 22, lines 42-54, reproduced above in claim 1 discussion) teaches away from the claimed invention. Appellants conclude that “such a defect as described by deVette would certainly dissuade one from using node to node information to determine network configuration” (see pg. 13, Appeal Brief). As discussed above with respect to claim 1, the cited portion is not suggesting that deVette’s own invention should not be used simply because of the rare possibility and potential of cascading errors in connectivity messages.

Additionally, regarding claim 54, Appellants argue that the combination of deVette and Elliot does not teach the step of “determining a network configuration having a topological map of network links corresponding to nodal relationship information obtained in said discovery step.” Examiner respectfully disagrees. DeVette expressly discloses a method which comprises the step determining a network configuration corresponding to nodal relationship information provided by a topological mapping processor. For example, deVette at column 4, lines 2-12 recites:

“a method of determining the configuration of a WDM network having a plurality of network nodes interconnected by WDM compatible optical fibre segments which carry a plurality of WDM compatible wavelengths capable of being modulated by signals and a mapping processor, comprising the steps of: at least one of the nodes determining its configuration; each of the at least one nodes reporting its configuration data to the mapping processor; and the mapping processor determining the overall configuration of the network from the configuration data received from the at least one nodes.”

Accordingly, Examiner maintains the position that deVette broadly and reasonably teaches the limitation “determining a network configuration having a topological map of network links corresponding to nodal relationship information obtained in said discovery step.”

Furthermore, in response to Appellants’ argument that the examiner’s conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the appellants’ disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). The reconstruction of the claimed invention using deVette and Elliot used only knowledge which was within the level of ordinary skill in the art and therefore is proper.

II. DEPENDENT CLAIMS

A. Claim 2 is rejected under 35 U.S.C. 102(e) as being anticipated by deVette.

Claim 2 is dependent on claim 1. Regarding claim 2, Appellants argue that deVette fails to teach or suggest the step of “generating an alarm signal indicative of a network configuration error responsive to detecting an error between the network configuration and a planned configuration.” Appellants assert that none of the portions of deVette cited in the previous Office action describes detecting an error between a network configuration and a planned configuration. The cited portions of deVette in the previous Office action have been reproduced and discussed above with respect to claim 20. In view of this discussion, Examiner maintains the

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position that deVette teaches the limitation “generating an alarm signal indicative of a network configuration error responsive to detecting an error between the network configuration and a planned configuration.”

B. Claim 4 is rejected under 35 U.S.C. 102(e) as being anticipated by deVette.

Claim 4 is dependent on claims 1 and 2. Regarding claim 4, Appellants argue that deVette fails to teach or suggest the step of “correlating information from each node to isolate the location of a configuration error.” Appellants assert that none of the portions of deVette cited in the previous Office action describe the claimed limitation. The cited portions of deVette are reproduced, in part, below:

“a fault processor associated with at least one of the network nodes for generating fault data, and a fault isolation processor for monitoring and processing the fault data of each network node, a fault signal containing the fault data for modulating a WDM compatible fault wavelength reserved throughout the network, whereby the fault processor of a network node may insert fault data into the fault signal and the fault isolation processor may retrieve the fault data from the fault signal and identify and isolate faults in the entire network.” (col. 3, lines 33-41)

DeVette explicitly discloses that the network comprises a fault processor which monitors and processes the fault data of “each network node.” The fault processor also retrieves fault data from fault signals from each of the nodes and functions to “identify and isolate faults in the entire network.” As such, Examiner maintains the position that deVette teaches the limitation “correlating information from each node to isolate the location of a configuration error.”

C. Claim 7 is rejected under 35 U.S.C. 102(e) as being anticipated by deVette.

Claim 7 is dependent on claims 1 and 6. Regarding claim 7, Appellants argue that deVette fails to teach or suggest the step of “each node forming an information model of the *entire* optical network” (see pg. 15 of Appeal Brief, emphasis added). First, it is noted that the claims do not call for the step of each node forming an information model of the *entire* optical network, but rather, the step of “each node forming an information model of the optical network.” Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

As discussed above with respect to claim 20, the “determining,” “receiving,” “modifying,” and “transmitting of network configuration information is understood as “a data format that facilitates determining a topological map.” Accordingly, it is the examiner’s position that deVette reasonably and broadly teaches the limitation of “each node forming an information model of the optical network.”

D. Claims 8 and 21 is rejected under 35 U.S.C. 102(e) as being anticipated by deVette.

Claim 8 is dependent on claims 1, 6, and 7. Claim 21 is dependent on claim 20. Regarding claims 8 and 21, Appellants argue that deVette fails to teach or suggest the step of “each node generates an alarm signal indicative of a network configuration error responsive to detecting an error in the network configuration.” As discussed with respect to claim 2, deVette specifically teaches this limitation. Again it is parenthetically noted that the disclosure of “at least one of the nodes” encompasses the limitation of “each node.”

E. Claim 9 is rejected under 35 U.S.C. 102(e) as being anticipated by deVette.

Claim 9 is dependent on claims 1 and 6-8. Regarding claim 9, Appellants have appealed this claim but have failed to provide an argument for this limitation. This limitation claims the step of “correlating the alarm signals of the nodes to isolate a location of a configuration error.”

At column 3, lines 39-41, deVette expressly teaches this limitation:

“the fault isolation processor may retrieve the fault data from the fault signal and identify and isolate faults in the entire network.”

Accordingly, it is the examiner’s position that deVette clearly teaches the limitation of claim 9.

F. Claims 11, 41, 43, and 48-50 are rejected under 35 U.S.C. 102(e) as being anticipated by deVette.

Claim 11 is dependent on claims 1 and 10. Claim 41 is dependent on claim 40. Claim 43 is dependent on claims 40 and 42. Claim 48 is dependent on claim 40. Claims 49 and 50 are dependent on claims 40 and 48. Regarding claim 11, Appellants argue that deVette fails to teach or suggest the step of “responsive to determining that the network configuration differs from a planned configuration, issuing an error correction command to alter at least one aspect of the optical network to form a compatible network configuration.” Similarly, regarding claims 41, 43, and 48-50, Appellants assert that deVette does not teach or suggest “an alarm signal responsive to the network configuration being different from a provisioned network configuration.” Appellants assert that none of the portions of deVette cited in the previous Office action describes “issuing an error correction command.” Appellants also contend that

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“there is no basis to infer that the alarm message discussed by deVette contains any command” (pg. 15 of Appeal Brief). In the cited portions of deVette that were reproduced above with respect to the discussion of claim 2, DeVette expressly discloses the step of “transmitting an alarm message to denote an inconsistency between the identification data and the configuration information” and discloses that “[a]s the connectivity map is thereafter regenerated, any discrepancies which reflect the existence of a fault or a reprovisioning will become apparent and can be processed.” The transmitting of an alarm message and the processing of any discrepancies is understood as and reasonably interpreted to be “issuing an error correction command.” Accordingly, Examiner maintains the position that DeVette broadly and reasonably teaches the limitation “responsive to determining that the network configuration differs from a planned configuration, issuing an error correction command to alter at least one aspect of the optical network to form a compatible network configuration.”

G. Claims 13, 25 and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by deVette.

Claim 13 is dependent on claims 1 and 2. Claim 34 is dependent on claims 29 and 30. Claim 25 is dependent on claims 20, 23, and 24. Appellants argue that deVette does not teach or suggest “issuing an alarm signal responsive to determining incorrectly connected optical fibers.” Examiner respectfully disagrees. In describing the general background of the invention, deVette, at column 1, lines 50-54, discloses that:

“WDM presents a significant challenge to the network service provider in terms of *determining the physical connectivity of the network* for the purposes of maintenance, fault isolation, network-fill usage, performance monitoring and protection readiness.” (emphasis added)

DeVette further discusses that in the prior art, “manually entered data can become easily out of date as the physical fibre connections are constantly changed” (col. 1, line 67- col. 2, line 2), and that “[n]ot infrequently, a correct and up to date topology was not recorded until all or part of the network failed and the topology was manually retraced during the repair effort” (col. 2, lines 2-5). Furthermore, deVette discloses that in prior endeavors, network service providers were “unable to accurately monitor the signal connectivity of the network, even with an accurate topology of the various network elements or node” (col. 2, lines 10-14). It is clear that deVette, among other things, is clearly addressing the problem of incorrectly connected fibers – i.e., “the physical connectivity of the network” and the issue of being “unable to accurately monitor the signal connectivity of the network.” In introducing his invention, DeVette addresses these issues by providing “a network where individual nodes can detect the connectivity of incoming optical signals” (col. 2, lines 35-36). Furthermore, as discussed above with respect to claim 11, deVette discloses that “[a]s the connectivity map is thereafter regenerated, any discrepancies which reflect the existence of a fault or a reprovisioning will become apparent and can be processed” (col. 28, lines 25-27).

It is noted that during prosecution before the USPTO, claims are to be given their broadest reasonable interpretation, and the scope of a claim cannot be narrowed by reading disclosed limitations into the claim. See *In re Morris*, 127 F.3d 1048, 1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997); *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989); *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541,550 (CCPA 1969).

As such, given the broadest reasonable interpretation of the limitations, Examiner maintains the position that deVette teaches the limitation “issuing an alarm signal responsive to determining incorrectly connected optical fibers.”

H. Claim 37 is rejected under 35 U.S.C. 102(e) as being anticipated by deVette.

Claim 37 is dependent on claim 36. Regarding claim 37, Appellants argue the position as advanced in claim 36, discussed above. Again, since CNM 123 and node 101 perform all the functions as claimed and since each are directly connected to and operate exclusively with each other, CNM 123 is understood as being integral to node 101. Therefore, CNM 123 is understood as being part of node 101. Appellants further argue that deVette never discloses an alarm generator comparing the information model with the provisioning data and generating a configuration alarm responsive to detecting an error in network configuration. As discussed with respect to claim 2 above, DeVette explicitly discloses that the network generates and maintains an “up-to-date map of the topology and connectivity of the network” and periodically, an “alignment audit” is conducted wherein “any discrepancies which reflect the existence of a fault or a reprovisioning will become apparent and can be processed.” DeVette also explicitly discloses that the “*theoretical* topology and connectivity data” is compared with the “*actual* connectivity of the network.” Still yet further, deVette specifically discloses that an “alarm message” is transmitted “to denote an inconsistency between the identification data and the configuration information.” As such, Examiner maintains the position that deVette teaches the limitation “an alarm generator comparing the information model with the provisioning data and generating a configuration alarm responsive to detecting an error in network configuration.”

I. Claim 47 is rejected under 35 U.S.C. 102(e) as being anticipated by deVette.

Claim 47 is dependent on claim 40. Regarding claim 47, Appellants argue that deVette fails to teach or suggest that “*each* node includes ‘an optical transport complex...’ and ‘an administrative complex...’” (pg. 22 of Appeal Brief). Examiner respectfully disagrees. It is noted that, as recited by the claim, the “optical transport complex” is for “adding, dropping and passing through optical channels” and that the “administrative complex” is for “administering the optical transport complex and having a memory adapted to receive provisioning data for the optical transport complex.” Attention is directed to Fig. 2A of deVette which depicts a typical node in the disclosed network. Incoming signals along fibers 238 and 237 can be passed through as outgoing signals along fibers 254 and 255. Additionally, signals can dropped through fibers 250 and 251 and signals can be added via fibers 248 and 249. Clearly, this reads on the limitation of “an optical transport complex for adding, dropping, and passing through optical channels.” The “administrative complex” as claimed simply “administers the optical transport complex.” The OSC and payload processors 233 and 234 can be understood as the “administrative complex” since they administer the transmission of optical channels of the transport complex. Furthermore, it is noted that the OSC processors in each node include a “buffer space” (see col. 16, lines 61-63) and that “corresponding upstream node-to-node messages 400” are “stored by the OSC processor 280 of the node” (see col. 19, lines 56-60). This is reasonably interpreted to read on the limitation of the administrative complex “having a memory adapted to receive provisioning data.” Accordingly, Examiner maintains the position that deVette broadly and reasonably teaches the limitation wherein “each node includes ‘an

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optical transport complex for adding, dropping, and passing through optical channels; and an administrative complex for administering the optical transport complex and having a memory adapted to receive provisioning data for the optical transport complex.”

J. Claims 5, 6, 22-24, 38, 39, and 42 are rejected under 35 U.S.C. 102(e) as being anticipated by deVette.

Claims 5, 6, 38, 39, and 42 are dependent on previous claims. The basis for Appellants' arguments regarding claims 5, 6, 22-24, 38, 39, and 42 rests on the allegation that deVette lacks limitations from previous claims. Since Examiner has showed that deVette does indeed teach all the limitations from previous claims, the rejection of claims 5, 6, 20-24, 38, 39, and 42 under 35 U.S.C. 102(e) as being anticipated by deVette is sustained.

K. Claims 14-16 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over deVette.

Claims 14-16 are dependent on claims 1 and 2. Claims 26-28 are dependent on claims 20 and 23. The basis for Appellants' arguments regarding claims 14-16 and 26-28 rests on the allegation that deVette lacks a limitation from previous claims. Since Examiner has showed that deVette does indeed teach all the limitations of the previous claims, the rejection of claims 14-16 and 26-28 under 35 U.S.C. 103(a) as being unpatentable over deVette is sustained.

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L. Claims 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over deVette.

Claims 31-33 are dependent on claims 29 and 30. The basis for Appellants' arguments regarding claims 31-33 rests on the allegation that deVette lacks a limitation from claim 30. Since Examiner has showed that deVette does indeed teach all the limitations of claim 30, the rejection of claims 31-33 under 35 U.S.C. 103(a) as being unpatentable over deVette is sustained.

In response to Appellants' argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the appellants' disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case, since only specific teachings from deVette and knowledge which was within the level of ordinary skill at the time of invention were used to construct the invention, the reconstruction is proper.

M. Claims 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over deVette.

Claims 44-46 are dependent on claims 40, 42, and 43. The basis for Appellants' arguments regarding claims 44-46 rests on the allegation that deVette lacks a limitation from claim 43. Since Examiner has showed that deVette does indeed teach all the limitations of claim

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43, the rejection of claims 44-46 under 35 U.S.C. 103(a) as being unpatentable over deVette is proper.


As discussed above, as long as a reconstruction takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the appellants' disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case, since only specific teachings from deVette and knowledge which was within the level of ordinary skill at the time of invention were used to construct the invention, the reconstruction is proper.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,




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